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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,092	10/02/2003	William Nicholson	66396-028	8387

7590

10/21/2005

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EXAMINER
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MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/676,092	NICHOLSON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ronnie Mancho	3663	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Status

1. The present case is under final from the amendment submitted 8-3-05.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 1 and 15, the phrase "more than one type" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

The dependent claims are rejected for depending on claims 1 or 15.

### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Beckert et al (6009363).

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Regarding claim 1, Beckert et al (abstract) disclose a multipurpose multifunctional (M/M) interface device 22 (figs. 1, 2), comprising:

a plurality of communication ports (66, 68, 72, etc; figs. 2&4) including:

one or more system ports configured to couple to a system (vehicle, figs. 1&2, col. 5, lines 13-22) to be diagnosed;

one or more diagnostic ports (figs. 1&2) configured to couple to at least one diagnostic system 28 (col. 3, lines 65 to col. 4, lines 1-9);

a set of power management modules (fig. 9; col. 14, lines 14-67) configured to provide, selectively, power at a full power level and a reduced power level; and

a main processor module 62 (fig. 2&3; col. 5, lines 63-67; col. 6, lines 7-14) configured to control communications between the system ports and the diagnostic ports, and to selectively transition the M/M interface device between a standby mode at the reduced power level and an operational mode at the full power level (col. 14, lines 57-67).

Regarding claim 2, Beckert et al (col. 14, lines 56 to col. 15, lines 1-3) disclose the device of claim 1, wherein a transition of the M/M device from the standby mode to the operational mode is responsive to an occurrence of at least one of a set of power up trigger events, wherein the set of power up trigger events includes activity on at least one of the diagnostic ports or system ports.

Regarding claim 3, Beckert et al disclose the device of claim 2, wherein the one or more diagnostic ports includes a set of serial diagnostic ports (i.e. USB ports, fig. 2) and the set of power up trigger events includes activity on at least one of the set of serial diagnostic ports.

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Regarding claim 4, Beckert et al disclose the device of claim 2, wherein the set of power up trigger events includes a restoration of full power.

Regarding claim 5, Beckert et al disclose the device of claim 1, wherein a transition of the M/M device from the operational mode to the standby mode is responsive to an occurrence of at least one of a set of power down trigger events, wherein the set of power down events includes inactivity on at least one of the diagnostic ports or system ports for a predetermined period of time (cols. 14&15).

Regarding claim 6, Beckert et al disclose the device of claim 5, wherein the set of power down trigger events includes a loss of full power (cols. 14&15).

Regarding claim 7, Beckert et al disclose the device of claim 1, wherein the set of power management modules includes a main power module configured to provide the high power level from at least one external power source.

Regarding claim 8, Beckert et al disclose the device of claim 1, wherein the set of power management modules includes a battery power module configured to provide at least one of the high power level and the reduced power level from at least one internal battery.

Regarding claim 9, Beckert et al disclose the device of claim 1, wherein the set of power management modules includes a battery charger.

Regarding claim 10, Beckert et al disclose the device of claim 9, wherein the battery charger is configured to charge a rechargeable battery at a fast rate when the device is coupled to a power source of a voltage about equal to or greater than a voltage rating of the battery, and at a slow rate when the power source is of a voltage substantially less than the voltage rating of the battery.

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Regarding claim 11, Beckert et al disclose the device of claim 9, wherein the battery charger is configured to charge an external battery coupled to the M/M interface device via a power port.

Regarding claim 12, Beckert et al disclose the device of claim 9, wherein the M/M interface device includes a thermal sensor, and the main processor module varies the charge rate as a function of an internal temperature of the M/M device measured by the thermal sensor.

Regarding claim 13, Beckert et al disclose the device of claim 1, wherein the set of power management modules is configured to provide power to at least one of the systems to be diagnosed or the diagnostic system.

Regarding claim 14, Beckert et al disclose the device of claim 1, wherein the main processor module is configured to generate analog signals from digital signals received from the one or more system ports, and to provide the analog signals to at least one diagnostic port.

Regarding claim 15, Beckert et al (abstract) disclose a multipurpose multifunctional (M/M) interface device (figs. 1&2) for vehicle diagnostics, comprising:

a plurality of communication ports (66, 68, 72, etc; figs. 2&4) including:

one or more vehicle system ports (figs. 1&2, col. 5, lines 13-22)

configured to couple to at least one vehicle;

one or more diagnostic ports configured to couple to at least one vehicle

diagnostic system 28 (col. 3, lines 65 to col. 4, lines 1-9);

a set of power management modules (fig. 9; col. 14, lines 14-67) configured to provide a full power level and a reduced power level; and

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a main processor module 62 (fig. 2&3; col. 5, lines 63-67; col. 6, lines 7-14) configured to control communications between the system ports and the diagnostic ports, the main processor module also configured to selectively transition the M/M interface device between a standby mode at the reduced power level and an operational mode at the full power level (col. 14, lines 57-67).

Regarding claim 16, Beckert et al disclose the device of claim 15, wherein the communications ports include an inductive port configured to couple to an ignition system of the at least one vehicle, and the main processor module is configured to measure revolutions per minute (RPM) of a vehicle engine as a function of a signal received by the inductive port.

Regarding claim 17, Beckert et al disclose the device of claim 15, wherein the communications ports include a radio frequency (RF) antenna port configured to couple to a high voltage portion of an ignition system of the at least one vehicle, and the main processor module is configured to measure RPMs of a vehicle engine as a function of a signal received by the RF port.

Regarding claim 18, Beckert et al disclose the device of claim 15, wherein the communications ports include an on-board diagnostics (OBD) port configured to couple to an OBD device of the at least one vehicle, and the main processor module is configured to measure RPM or other OBD signals of a vehicle engine as a function of a signal received by the OBD port.

Regarding claim 19, Beckert et al disclose the device of claim 15, wherein the main processor module and the set of power management modules are components mounted on a printed circuit board (PCB).

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Regarding claim 20, Beckert et al disclose the device of claim 15, wherein the communication ports include one or more RS-232 ports, and the M/M device comprises a communication port processor configured for processing messages and data related to the one or more RS-232 ports.

Regarding claim 21, Beckert et al disclose the device of claim 15, wherein the set of power management modules is configured to power one or more external devices, including one or more of a display device, a personal digital assistant, or the at least one vehicle diagnostic system.

Regarding claim 22, Beckert et al disclose the device of claim 15, wherein the at least one vehicle diagnostic system includes a portable gas analyzer.

Regarding claim 23, Beckert et al disclose the device of claim 15, wherein the set of power management modules includes a battery charger configured to charge at least one battery at a fast rate when the device is coupled to an external power source that is of a voltage about equal to or greater than a voltage rating of the at least one battery, and at a slow rate when the device is coupled to an external power source that is of a voltage substantially less than the voltage rating of the at least one battery.

Regarding claim 24, Beckert et al disclose the device of claim 23, wherein the at least one battery includes an internal rechargeable battery.

Regarding claim 25, Beckert et al disclose the device of claim 15, wherein the main processor module is configured to generate analog signals from digital signals received from the one or more system ports, and to provide the analog signals to at least one diagnostic port.



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Regarding claim 26, Beckert et al disclose the device of claim 15, further comprising a monitor configured to monitor the environmental conditions of the device and to adjust signals generated by the device in response to at least one of the environmental conditions exceeding a threshold value.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beckert et al (6009363) in view of Chene et al (6587768).

Regarding claim 27, Beckert et al (abstract) disclose a multipurpose multifunctional (M/M) interface device (figs. 1&2) for vehicle diagnostics, comprising:

a plurality of communication ports (66, 68, 72, etc; figs. 2&4) including:

one or more vehicle system ports (figs. 1&2, col. 5, lines 13-22)

configured to couple to at least one vehicle;

one or more diagnostic ports configured to couple to at least one vehicle

diagnostic system 28 (col. 3, lines 65 to col. 4, lines 1-9);

a set of power management modules (fig. 9; col. 14, lines 14-67) configured to provide a full power level and a reduced power level; and

a main processor module 62 (fig. 2&3; col. 5, lines 63-67; col. 6, lines 7-14) configured to control communications between the system ports and the diagnostic ports, the main processor

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module also configured to selectively transition the M/M interface device between a standby mode at the reduced power level and an operational mode at the full power level (col. 14, lines 57-67).

Beckert did not particularly mention that the interface is non-integral to a vehicle. However, Chene et al teaches of a multipurpose multifunctional interface device (17, figs. 1-7) for vehicle diagnostics, wherein the interface device 17 is non-integral to a vehicle. Therefore, it would have been obvious to one of ordinary skill in the art of vehicle diagnostics at the time the invention was made to modify the Beckert device as taught by Chene for the purpose of advantageously providing a portable hand-held diagnostic system.

#### ***Response to Arguments***

9. Applicant's arguments filed 8-3-05 have been fully considered but they are not persuasive.

The applicant's argument is based on the amended claim phraseology "'more than one type'". However, the phrase is indefinite as already rejected according to MPEP above.

Next, the applicant argument with respect to claim 27 is moot in view of the 103 rejection above.

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***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Communication***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho  
Examiner  
Art Unit 3663

5/6/05

  
**JACK KEITH**  
SUPERVISORY PATENT EXAMINER